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MAR - 5 1999

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March 5, 1999

VIA HAND DELIVERY

Magalie Roman Salas, Esquire
Secretary
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445 Twelfth Street, S.W.
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Re: RM-9418

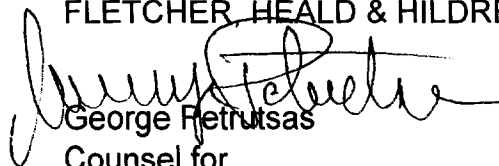
Dear Ms. Salas:

On behalf of Harris Corporation, Microwave Division, we are filing an original and nine (9) copies of its Comments on the above-referenced petition for rulemaking filed by the Fixed Point-to-Point Section, Wireless Communications Division of The Telecommunications Industry Association.

Please communicate with us if additional information is required.

Very truly yours,

FLETCHER, HEALD & HILDRETH, PLC



George Petrusas
Counsel for
Harris Corporation, Microwave Division

GP:cej
Enclosures
cc: See Certificate of Service

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BEFORE THE

Federal Communications Commission

WASHINGTON, D.C. 20554

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MAR 5 1999
FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)
)
Amendment of Parts 25, 74, 78, 90,)
and 101 of the Commission's Rules) RM No. 9418
to Facilitate Fixed Point-to-Point)
Terrestrial Microwave Radio Service)
Licensee Use of the 23 GHz and)
10 GHz Bands and to Eliminate)
Certain Inconsistencies in Such Rules)

To: The Commission

COMMENTS OF
HARRIS CORPORATION- MICROWAVE DIVISION

Harris Corporation through its Microwave Division ("Harris-Microwave" or "Harris"),¹ by counsel, submits these comments in support of the above-referenced petition filed on March 6, 1998, by the Fixed Point-to-Point Section, Wireless Communications Division of the Telecommunications Industry Association ("TIA" or "Fixed Section"). Harris fully supports the petition. The proposals in that petition would restructure and would update the technical regulations governing the 23 GHz band and would promote the more efficient and effective use of the frequencies in that band. The proposals would also facilitate access to those frequencies by allowing the use of

¹Harris is a Florida corporation with its headquarters located in Melbourne, Florida. Through its Microwave Division, located in Redwood Shores, California, Harris designs, develops and manufactures microwave and multiplex systems used by licensees in the terrestrial fixed microwave service. Harris is one of the largest suppliers of microwave equipment in the global market. As a leading manufacturer of equipment used in the terrestrial fixed services, Harris is interested in advancing the state-of-the-art in microwave technology and to maximize efficient use of the spectrum available for all microwave services.

frequencies in the entire band by common carrier as well as by private microwave system applicants and by permitting conditional licensing. Prompt rulemaking action looking towards adoption of TIA's proposals would be in the public interest. Harris urges the Commission to grant the petition and to institute a rulemaking proceeding as soon as possible looking towards the adoption of the proposals therein.

Comments

In summary, TIA's primary proposals are:

Rechannelize the 21.2-23.6 GHz band into 50, 40, 30, 20, 10, 5, and 2.5 MHz channels.

Tighten the frequency tolerance for the 23 GHz band to 0.001%.

Specify spectrum efficiency of one bit-per-second per Hertz ("1 bps/Hz") for the 23 GHz band.

Permit common carrier and private operational fixed users to share the entire 23 GHz band.

Designate 200 MHz of spectrum in the 23 GHz band for low power, limited coverage systems.

Change the antenna standards to allow: (i) 18 inch diameter antennas under the category A standard and one foot diameter antennas under the category B standard in the 23 GHz band; and (ii) two foot diameter antennas in the 10 GHz Band.

Amend Section 101.31(e) of the Commission's Rules to authorize conditional licensing in the 23 GHz band, that is to permit operation of a proposed microwave system while the application for that system is being processed by the Commission.²

²TIA proposes other changes to the Commission's Rules, such as minor corrections to the table of assignable bandwidths in Part 101, Subparts C and J; rules to permit digital modulation in the 6.875-7.125 and 12.7-13.25 GHz bands in Part 74,

The restructure of the 23 GHz is timely and proper; indeed, it is overdue. As the Fixed Section points out, this band, unlike the lower microwave bands, is not channelized. The petition proposes a reasonable channelization plan under which specific channels of 50, 40, 30, 20, 10, 5, and 2.5 MHz bandwidths would be set out in the Commission's Rules. Such a choice of assignable bandwidths would accommodate a variety of bandwidth requirements and would provide the flexibility needed in the assignment and use of the frequencies in the band. For equipment manufacturers, a standardized channel plan would facilitate the design and manufacture of a variety of equipment models addressing the needs of the market more effectively and economically. In sum, Harris believes that the proposed channeling plan is reasonable and proper and should be adopted.

The proposal to tighten tolerance to 0.001 percent for all systems in the 23 GHz band is necessary and should be adopted as well. The proposed tighter tolerance is fully consistent with the state of the art and, as TIA points out, it is necessary if the proposed channelization plan is to be fully implemented.

Harris also agrees with TIA that the 1 bps/Hz efficiency standard now required in practically all microwave bands below 19.7 GHz would be appropriate for the 23 GHz band and should be adopted for digital systems. This would ensure that all proposed

and rules to permit automatic transmitter power control in the Television Broadcast Auxiliary Service. For the reasons given in the petition, Harris supports these proposals as well.

channels would be fully and efficiently utilized.³

Harris also supports the proposal to allow the use of 18 inch diameter antennas where the category A standard would be required and a 12 inch diameter antenna where category B standard would apply. As TIA points out, the 23 GHz will be increasingly used to interconnect cell sites in urban areas or in campus-type systems, where the antennas would more than likely be mounted on rooftops, monopoles, and other structure that cannot support large microwave dishes. Large microwave dishes also raise aesthetic and other issues and engender oppositions. The smaller antennas proposed by TIA would make them more acceptable and practical to use while providing sufficient path reliability. Accordingly, Harris recommends adoption of TIA's proposal to change the minimum antenna gain in the 23 GHz band to 34 dBi; the maximum bandwidth to 3.0 degrees, to retain the same front-to-back ratio as the current category A and category B standards, and reduce the sidelobe suppression requirements as appropriate.

The proposal to eliminate the priority access to one portion of the 23 GHz band by common carrier applicants and to another by private applicants is also reasonable and should be adopted. In light of the consolidation of the common carrier and the private microwave regulations into Part 101, the current practice for licensing common carrier systems in the lower portion of the 23 GHz band and private systems in the

³Harris also agrees with TIA's proposal under which non-conforming existing systems would be grandfathered indefinitely and with the proposal to allow an 18-month transition period after the proposed rules become effective for the manufacturers to meet the new technical standards. The transition period proposed is necessary and reasonable and should be provided.

higher portion of that band is no longer reasonable and should be discontinued.

Harris also supports the proposal to designate 200 MHz of spectrum in the 23 GHz band for low power limited coverage systems. Such systems, now operated under the provisions of Section 101.147(s), have been useful for many low power, low capacity operations and should continue to be authorized as proposed by TIA. The proposal should, therefore, be adopted along with the changes to Section 101.147(s) TIA has proposed.

Finally, Harris wishes to highlight and to express its strong support for TIA's proposal for conditional licensing in the 23 GHz band. Conditional operation is not permitted in that band, except for low power systems operated pursuant to Section 101.147(s) of the Commission's Rules, primarily because the band is shared with the federal government. TIA proposes direct coordination of 23 GHz applications with federal agencies and the designation of geographic exclusion areas (where sensitive government systems using 23 GHz operate) as the means for accommodating conditional operations in that band. Direct coordination with the federal government would certainly reduce delays, but such procedure would require the cooperation of the federal agencies involved. If that cooperation would be forthcoming, Harris would support the proposal. Failing that, Harris would recommend, as an alternative, adoption by the Commission of procedures whereby the relevant technical data of 23 GHz applications are transmitted electronically to NTIA by the Commission as soon as the application is filed and that data are then passed by NTIA to the various interested federal agencies, also electronically and without delay, with the objective of having a

response no later than within thirty days. If no objections are raised within such a pre-designated period, the applicant would be notified and would be advised that interim conditional operation of the proposed system may begin.

The delays in processing microwave applications for 23 GHz frequencies are unreasonable and adversely affect the public interest. Deployment of the new competitive wireless services the Commission has authorized in recent years is delayed. Harris respectfully urges the Commission to take all reasonable actions necessary to shorten substantially its licensing process. Conditional licensing would help. However, Harris believes that the Commission must address the basic problem and should devote the resources needed to deal with it.

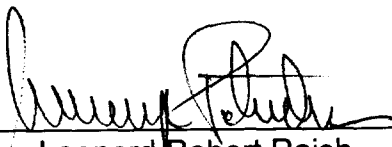
CONCLUSION

It is important that the Commission's regulations governing the 23 GHz band be brought up to date so that the frequencies in that band can be assigned promptly and used efficiently. TIA's Fixed Section has proposed a well thought out, comprehensive

plan for restructuring the 23 GHz band. Harris urges the Commission to grant TIA's petition and proceed to rulemaking as soon as possible.⁴

Respectfully submitted

HARRIS CORPORATION-MICROWAVE DIVISION

By: 
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Its Attorneys

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Date: March 5, 1999

⁴It is unfortunate that it took the Commission nearly one year to place the TIA's petition on public notice and seek comments. The petition was filed on March 6, 1998.

CERTIFICATE OF SERVICE

I, Chellestine Johnson, a secretary in the law firm of Fletcher, Heald & Hildreth, P.L.C. do hereby certify that true copies of the foregoing Comments were sent this 5th day of March, 1999, by first-class United States mail, postage prepaid, to the following:

Telecommunications Industry Association
2500 Wilson Blvd.
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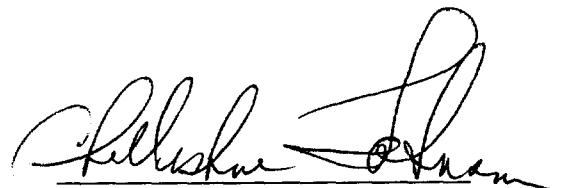
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***VIA HAND DELIVERY**



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